

CLEAN COPY OF AMENDED CLAIM 1

1. (Twice Amended) A method for continuous casting bars, billet, and slabs from a melt in dimensional ranges of approximately 20 to 150 mm thickness and approximately 600 to 3500 mm width by means of an oscillating, water-cooled casting mold in cooperation with a submerged-entry nozzle, employing casting powder for formation of casting slag, the method comprising the steps of:

measuring local temperatures and local heat flux densities of a casting mold in a meniscus area of the melt critical for the surface quality of a slab;

maintaining temperatures of the casting mold plates in the meniscus area within a predetermined temperature range (ΔT) by adjusting the operating parameters selected from the group consisting of the quantity of the cooling water, the throughput speed of the cooling water, the casting speed, and casting powder to be used, wherein, for measuring the temperatures, first and second thermoelements are arranged in the casting mold plates within a height range above and below the bath level in a first vertical row and a second vertical row extending parallel to one another, wherein the first and second thermoelements have uniform vertical spacing within the first and second rows, respectively, and are positioned substantially at a same height within the

first and second rows, respectively, wherein the first and second vertical rows are parallel to one another and positioned ~~and~~ at different depths of the wall of the casting mold plates, wherein based on a temperature difference of two of the first and second thermoelements positioned substantially at a same height, the corresponding local heat flux density is calculated, respectively; and

controlling, when knowing the optimal heat flux density or the maximum surface temperature, the best suited casting mold load for an optimal slab surface formation by adjusting at least one of the operating parameters selected from the group consisting of cooling water quantity and casting speed and casting powder.